



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200



647.0113
Job Sheet 168275

Part No: 647.0113

Job Qty: 15 ea

Part Name: Strut Doubler



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 11/13/17

Job Tracking No:

Due Date: 12/22/17

Created By: Linda Lacelle

Type: Stock

Description:

Note: DWG REV A1 SHEET 4 IPP REV:A 12.08.14 NEW ISSUE DD VERF:JFS

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	15 Ea		12/21/17	0.00	0.00	Start Up Container		<i>SC</i>
110	Waterjet	15 pcs		12/22/17	0.01	0.62	Waterjet1		<i>SC</i>
120	QC	15 pcs		12/22/17	0.00	0.00	QC2		<i>SC DAS</i>
130	QC	15 pcs		12/22/17	0.00	0.00	QC8		<i>38</i>
140	Outsource	15 pcs		12/22/17			ATG001-VC <i>Outsource</i>		<i>AT 18/02/07</i>
150	Packaging	15 pcs		12/22/17	0.00	0.00	Packaging2		<i>AT 18/02/07</i>
160	QC	15 pcs		12/22/17	0.00	0.00	QC5		<i>38</i>
190	Packaging	15 pcs		12/22/17	0.00	0.00	Packaging3 <i>ccp 089</i>		<i>21</i>
200	QC21-SA	15 Ea		12/22/17	0.00	0.00	QC21		<i>21</i>

Part Op 110 - 1-Cut as per Dwg

Descriptions: 140 - Issue P/O to ATG : *P003580*

190 - ***IDENTIFY AS PER APICAL MPP-120 BY STAMPING P# AND REV***

JAN 17 2017

WAB

Job Allocations

Operation	Component Part	Required	Inventory	Allocated	Std Qty
90-Start up Operation	M2024T3S.125	5	104	0	0

5018262

Part Specifications

Spec No	Description	Target/Tolerance	Limits	Type	Special Comments
1	Strut Doubler	4.000Inches $\pm$ 0.030	4.030 3.970		
2	Strut Doubler	11.450Inches $\pm$ 0.030	11.480 11.420		
3	Strut Doubler	1.700Inches $\pm$ 0.030	1.730 1.670		

DART
AEROSPACE
S025849



Strut Doubler

PART NO: 647.0113

Revision:

Operation:

Change No:

Start up Operation

Mfg Date: 12/20/17

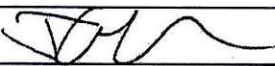
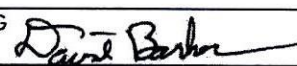
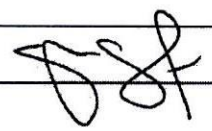
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Dart Aerospace Ltd.
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Hawkesbury, ON K64 1K7
CANADA
TEL.: 1 613 632-5200
Email: sales@dartaero.com
www.dartaerospace.com

FIRST ARTICLE INSPECTION CHECKLIST

Measured by: <i>SL</i>		Audited by: <i>38</i>		Preliminary Approval:	
Date: <i>17/12/20</i>		Date: <i>DEC 28 2017</i>		Date:	

Rev	Date	Change	Revised by <i>SL</i>	Approved <i>SL</i>
A	14.07.01	New Issue	KJ	

APICAL INDUSTRIES, INC.	ENGINEERING CHANGE NOTICE NO. 03985			SHEET 1 OF 2	
	DWG NO. 647.0100	REV: A	PREPARED BY J. BECKER	DATE: 7/15/13	EFFECT ON DWG ☐ INC. ☒ UNINC.
	DWG TITLE: SHEET METAL				
APPROVED BY: ENGR 		MFG 	QC 	EFF. NEXT ORDER	
TRANSACTION CODES (TC): A-ADD R-REVISE		REASON: REVISED NOTE 2. ADDED 647.0117			
C-CREATE D-DELETE					

IS

NOTES:

- 1 MATERIAL: ALUMINUM 2024-T3 PER AMS-QQ-A-250/4.
- 2 FINISH: IAW MPP-172 ANODIZE IAW SECTION 2.1,
PRETREATMENT IAW SECTION 3.1
AND PRIMER IAW SECTION 4.1.
3. DEBURR AND BREAK ALL SHARP EDGES.
4. IDENTIFY IAW MPP-120.
- 5 MATERIAL: 304 SS IAW AMS 5643.
- 6 FINISH: PRIME IAW MIL-P-23377J TYPE I CLASS N.
- 7 OTHER DIMENSIONS SAME AS 647.0112.

SHEET 1, ZONE D1 IS:

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 168275

DAS
30
9-89

NOV 16 2017

	C	647.0117			STRUT BRACKET	△	△
F/N	TC	PART NUMBER			DESCRIPTION	MATERIAL	SPECIFICATION
DOCUMENTS EFFECTED:					CHANGE CATEGORY	DER REVIEW REQUIRED	
☐ MDL ☐ INSTALL INSTRUCTIONS ☐ ICA ☐ FMS ☐ BOM					☐ MAJOR ☒ MINOR	☐ YES ☒ NO	

DQA: _____ Date: _____

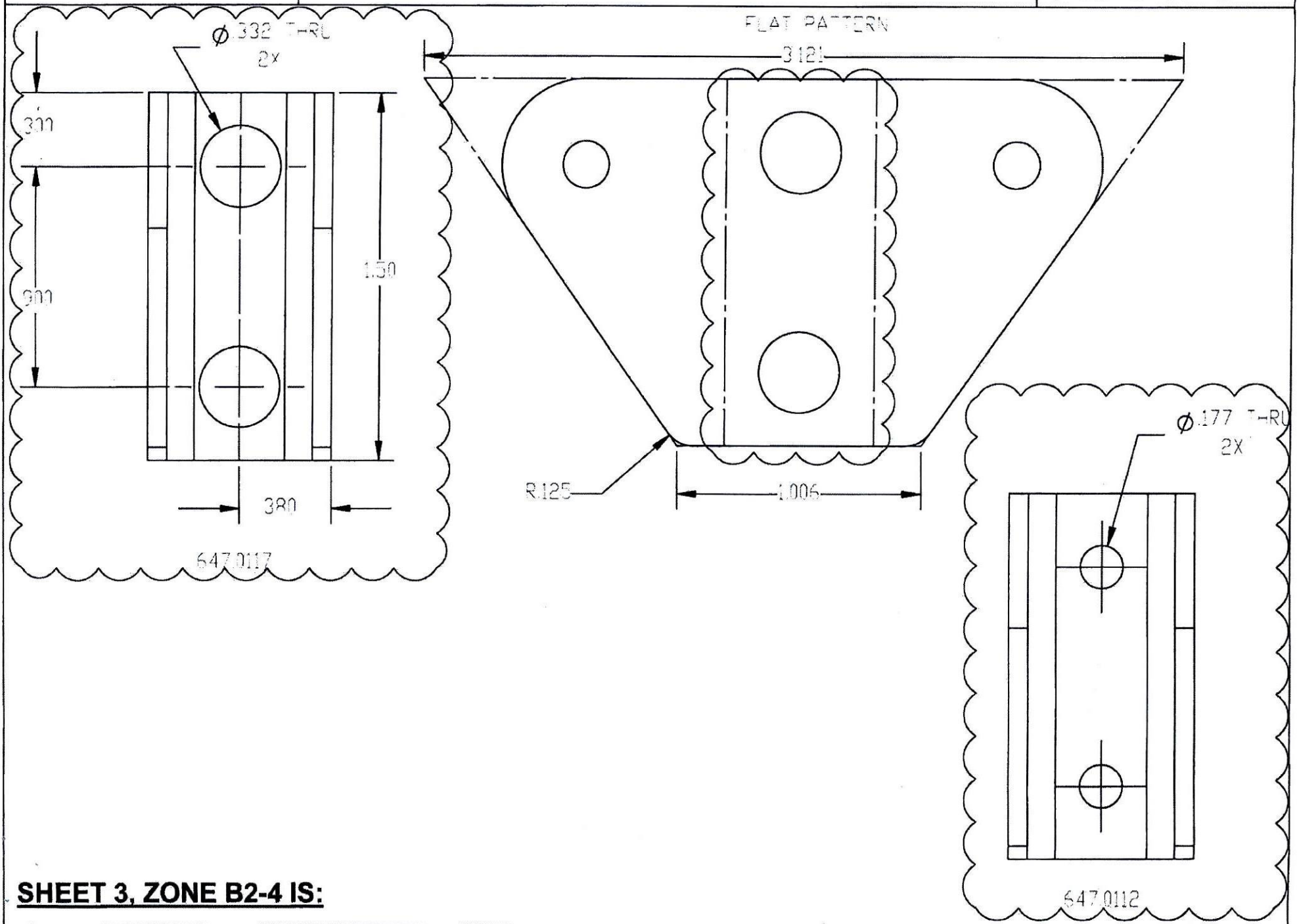


WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QS1042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐	OTHER : _____			



SHEET 3, ZONE B2-4 IS:

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

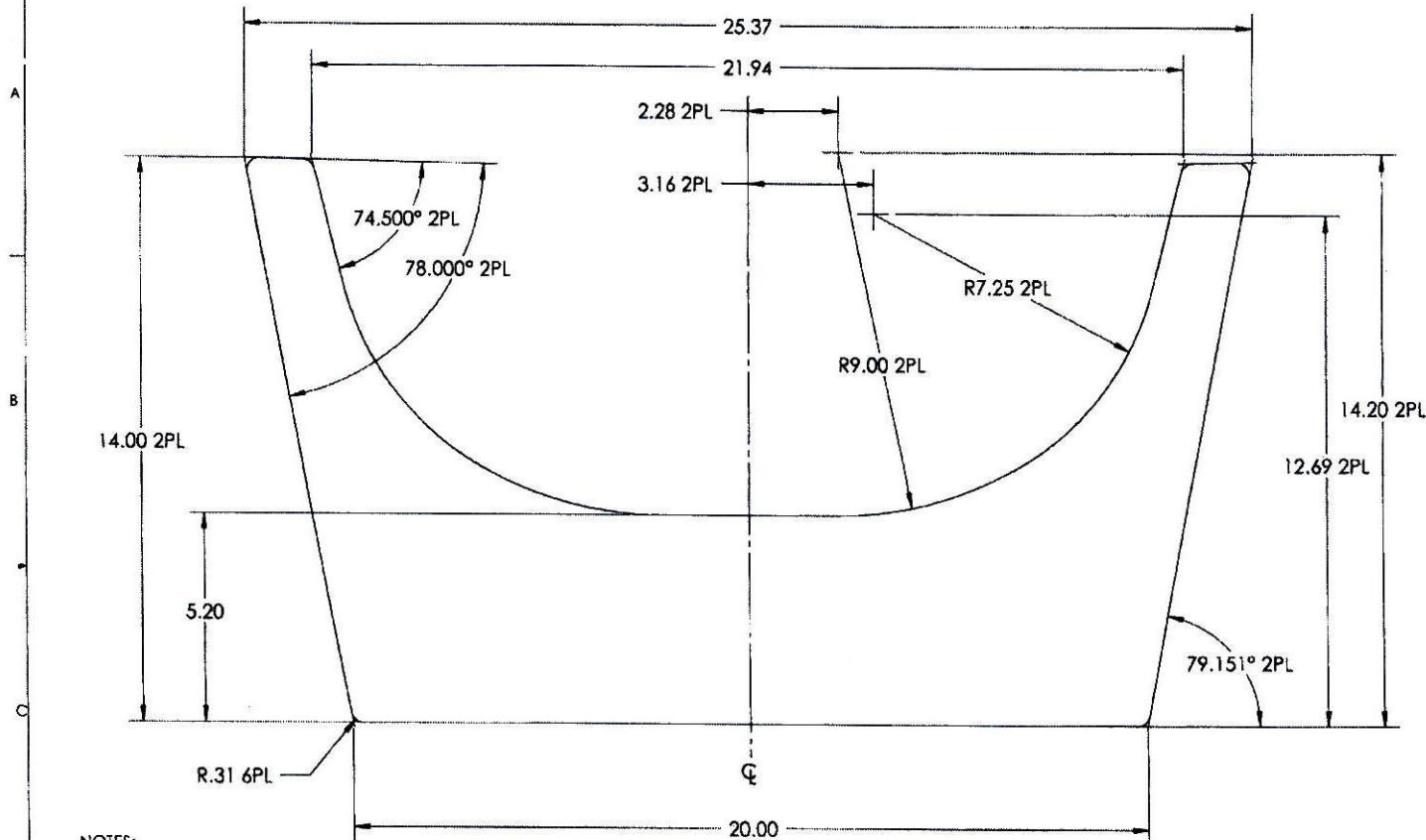
QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																																													
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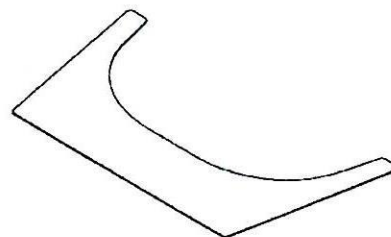
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REVISION			
REV	DESCRIPTION	DATE	APPROVED
1	LAST PROTOTYPE REVISION: P2		N/C
N/C	INITIAL RELEASE	03/28/09	P. BRAY
A	INCORPORATED ECN 03722 02964, 0009	04/28/11	P. BRAY



NOTES:

- 1 MATERIAL: ALUMINUM 2024-T3 PER AMS-QQ-A-250/4.
- 2 FINISH: HARD ANODIZE IAW MIL-A-8625 TYPE III, CLASS 2, COLOR BLACK; PRETREAT PR-148 ADHESION PROMOTER; PRIME IAW MIL-P-23377J TYPE I CLASS N.
3. DEBURR AND BREAK ALL SHARP EDGES.
4. IDENTIFY IAW MPP-120.
- 5 MATERIAL: 304 SS IAW AMS 5643.
- 6 FINISH: PRIME IAW MIL-P-23377J TYPE I CLASS N.



647.0110

UNINCORPORATED ECN(s)

03722

		647.0116	DOUBLER	△	△
		647.0115	CLIP	△	△
		647.0114	CLIP	△	△
		647.0113	STRUT DOUBLER	△	△
		647.0112	STRUT BRACKET	△	△
		647.0111	PANEL	△	△
		647.0110	ROOF DOUBLER	△	△
QTY	FIND #	PART #	DESCRIPTION	MATL	SPEC.
NEXT ASSY (S)			PARTS LIST		
646.9500			APICAL INDUSTRIES		
			2608 TEMPLE HEIGHTS DR.		
			OCEANSIDE, CA. 92056-3512 (760)724-5300		
			SHEETMETAL		
			UNLESS OTHERWISE SPECIFIED	8	07/02/06
			DIMENSIONS ARE IN INCHES	647.0100	REV A
			TOLERANCES ARE	SCALE NONE	SHEET 1 OF 6
			2 PLACE DECIMALS ± .01		
			3 PLACE DECIMALS ± .005		
			ANGLES ± .5°		

DQA: _____ Date: _____



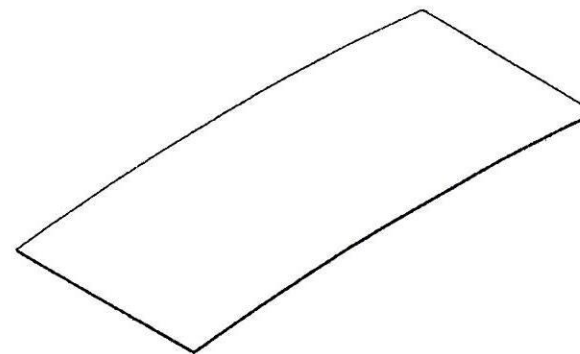
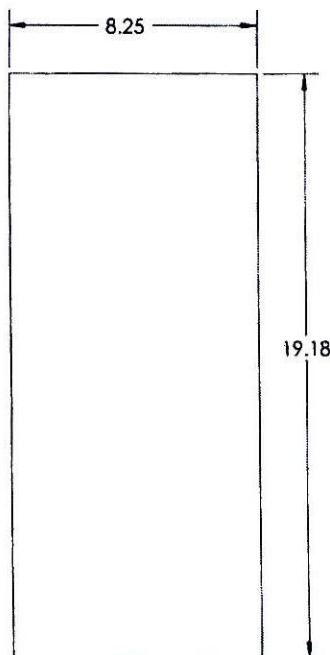
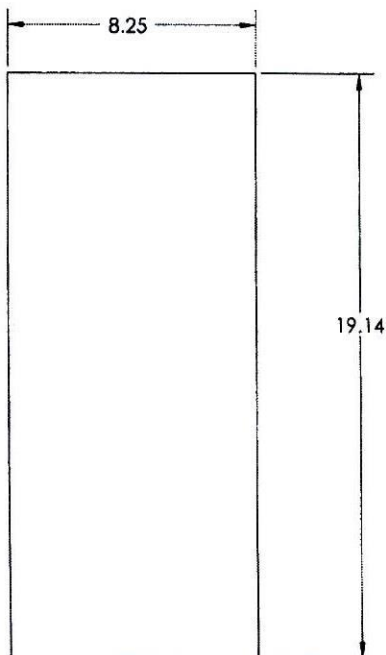
WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

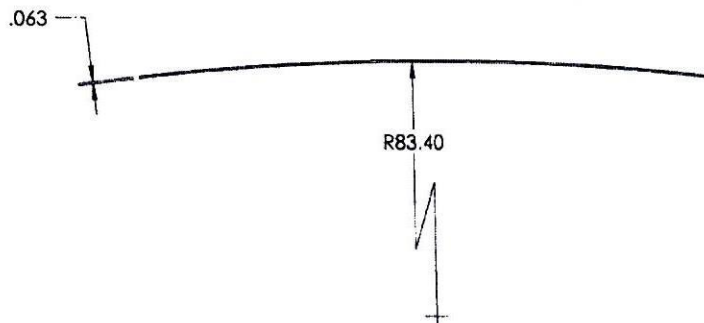
Work Order update only ☐

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FLAT PATTERN



ORIGINAL DATE 03-28-08 DRAWN BY R. ROBAID CHECKED P. BRAVO DRAWING APPROVAL P. BRAVO CONTRACT NO.		APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 3 PLACE DECIMALS ±.01 2 PLACE DECIMALS ±.005 ANGLES 1°		SHEET CODE 9 07M26	DWG. NO. 647.0100
SCALE: NONE		REV. A	SHEET 2 OF 6

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

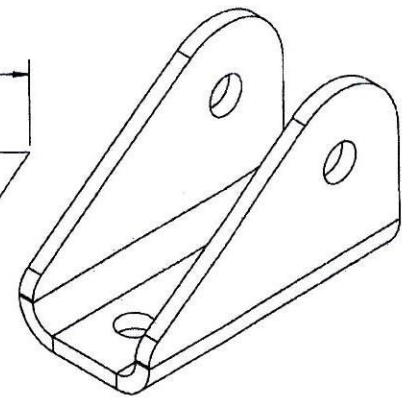
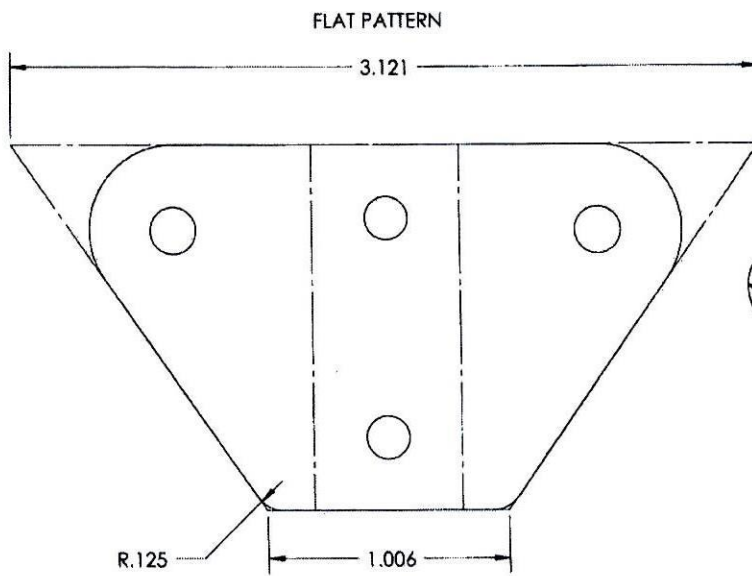
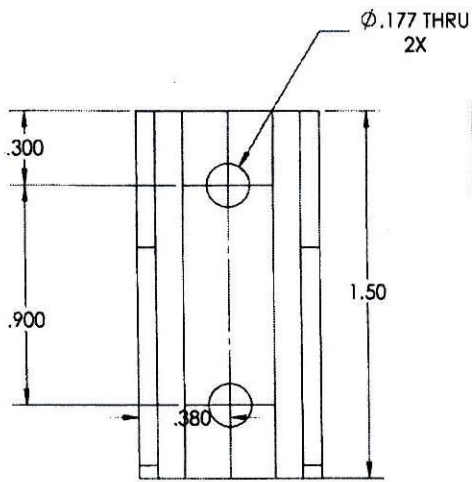
QA Closed: _____ Date: _____

Work Order update only ☐

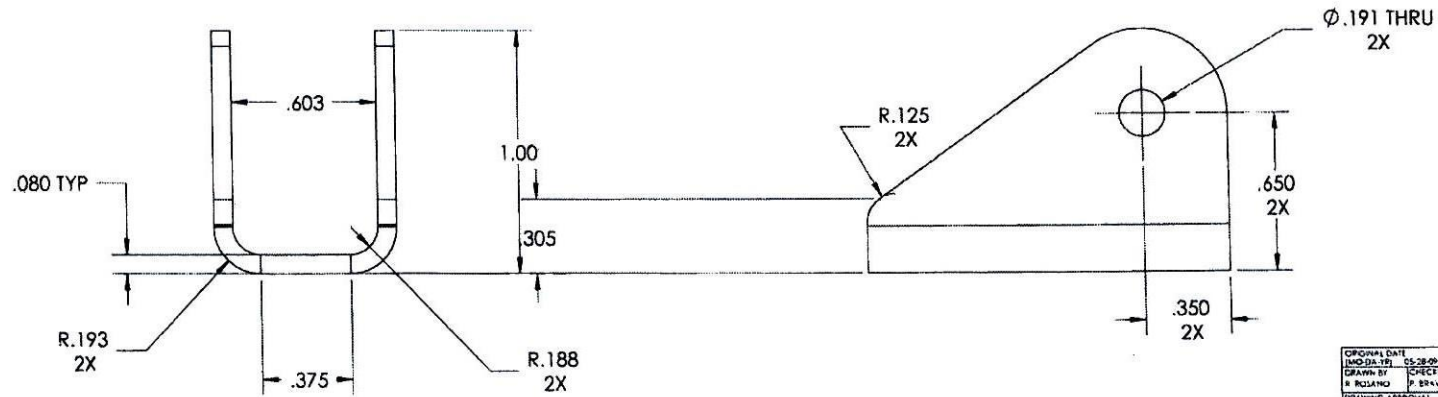
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REVISIONS			
REV	DESCRIPTION	DATE	APPROVED



647.0112



ORIGINAL DATE (MM/DD/YY) 05-28-09		APICAL INDUSTRIES	
DRAWN BY P. BRAYNO	CHECKED P. BRAYNO	2408 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760) 724-5300	
DRAWING APPROVAL P. BRAYNO	DATE 05-28-09	SHEETMETAL	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.01 3 PLACE DECIMALS ±.002 ANGLES ±.5°		SHEET L. & G. CODE B 07/M26	DWG. NO. 647.0100
SCALE NONE		REV A	
		SHEET 3 OF 6	

DQA: _____ Date: _____

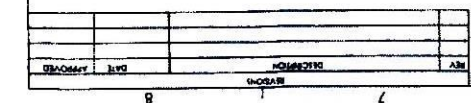


WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation			Disposition		
			Completed By		
			Lead hand / Supervisor Approval Verification		
			QC / QA Coordinator Approval		
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WORK ORDER NON-CONFORMANCE / UPDATE

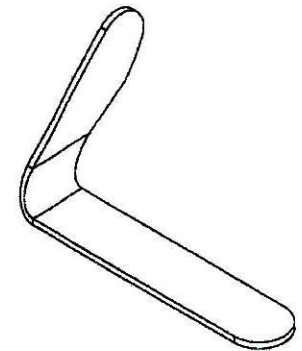
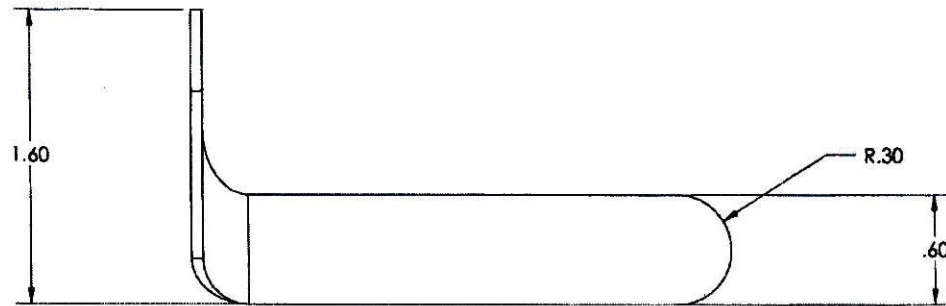
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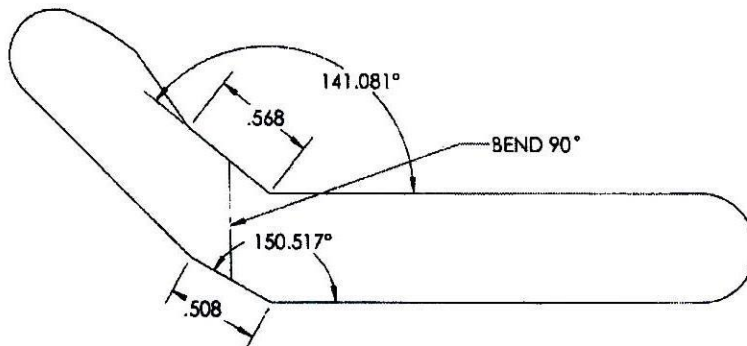
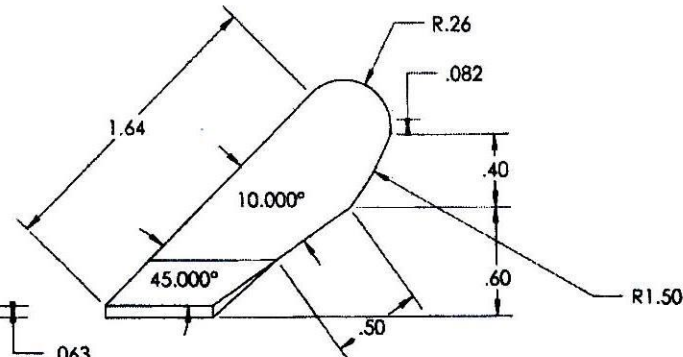
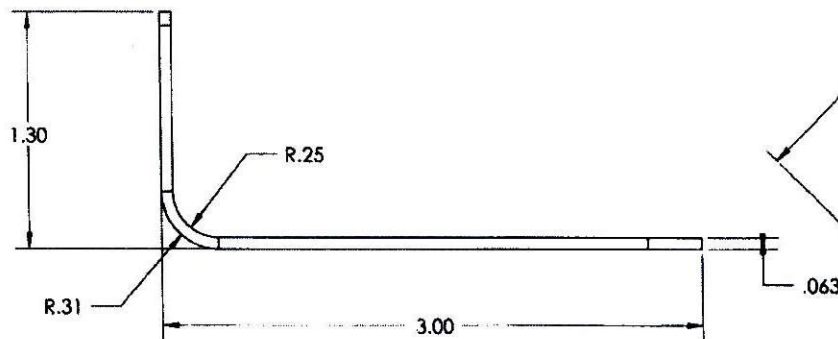
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<table style="width:100%; border: none;"> <tr> <td colspan="2" style="text-align: center; border: none;">Root Cause</td> <td colspan="4" style="text-align: center; border: none;">FAULT CATEGORY</td> </tr> <tr> <td style="border: none; vertical-align: top;"> Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ </td> <td style="border: none; vertical-align: top;"> No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐ </td> <td style="border: none; vertical-align: top;"> Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ </td> <td style="border: none; vertical-align: top;"> Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ </td> <td style="border: none; vertical-align: top;"> Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ </td> <td style="border: none; vertical-align: top;"> Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐ </td> </tr> <tr> <td colspan="4" style="border: none; vertical-align: top;"> OTHER : ☐ </td> </tr> </table>					Root Cause		FAULT CATEGORY				Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐	OTHER : ☐				
Root Cause		FAULT CATEGORY																			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐																
OTHER : ☐																					

THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF
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THE WRITTEN PERMISSION OF APICAL INDUSTRIES IS PROHIBITED.

REV	DESCRIPTION	DATE	APPROVED



647.0114 SHOWN
647.0115 OPPOSITE



FLAT PATTERN

ORIGINAL DATE 01-26-00		APICAL INDUSTRIES	
DRAWN BY R. ROSAND		2808 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
CHECKED BY P. BRAY		SHEETMETAL	
DATE 07/16/06		REV A	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 1 PLACE DECIMALS ± .015 2 PLACE DECIMALS ± .005 ANGLES ± .5°		SCALE NONE	SHEET 5 OF 6

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

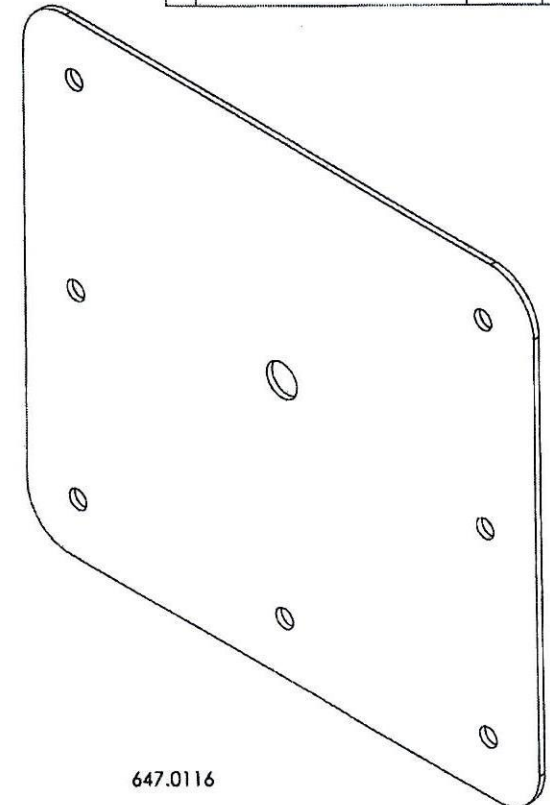
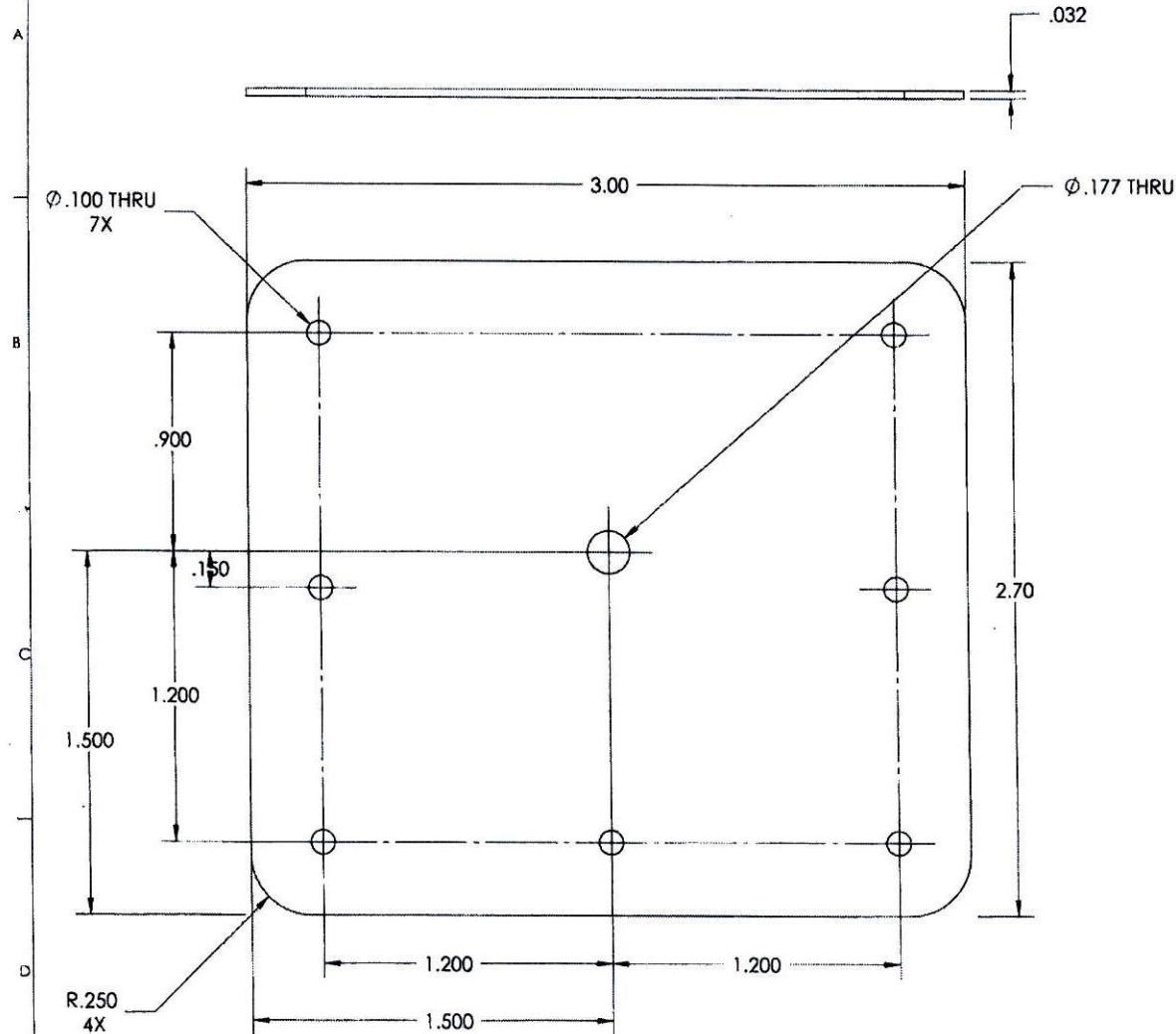
QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation			Disposition		
			Completed By		
			Lead hand / Supervisor Approval Verification		
			QC / QA Coordinator Approval		
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER :					

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REVISIONS			
REV	DESCRIPTION	DATE	APPROVED



647.0116

ORIGINAL DATE: 05-28-00		APICAL INDUSTRIES	
DRAWN BY: P. J. M. H. N. J.		2608 TEMPLE HEIGHTS DR.	
CHECKED BY: P. J. M. H. N. J.		OCEANSIDE, CA. 92056-3512 (760) 724-5300	
DRAWING APPROVAL: P. J. M. H. N. J.		SHEETMETAL	
CONTRACT NO.		SCALE: NONE	
UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES. TOLERANCES ARE: 2 PLACE DECIMALS: .01; 3 PLACE DECIMALS: .005; ANGLES: .5°		SHEET 6 OF 6	

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation			Disposition		
			Completed By		
			Lead hand / Supervisor Approval Verification		
			QC / QA Coordinator Approval		
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐			FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐		
OTHER : ☐					



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER PO038802

Supplier: ATG001-VC
A.T.G. Industries Inc
731 INDUSTRIELLE ROAD
ROCKLAND
ON
K4K 1T2 Canada
Phone: 613-446-4544
Fax: 613-446-4556

Attention: Lalande, Marc-Andre

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

PO No: PO038802

PO Date: 1/17/18

Due Date: 1/31/18

Purchase Order
Revision:

Revision Date:

Ship-To Contact: Baker, Diane
Phone: dbaker@dartaero.com

Via: Ground

Pymt Terms: Net 30

Freight Terms:

Special Comments:

E-MAILED
JAN 30 2018

Items										
Line Item	Job	Part	Description	Status	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
1	170136	D2348	Wearplate (Key Way) Issue P/O: <i>See attached</i> Black Anodize per Dwg D2348 Rev. C	Firmed	1/31/18	20 pcs	0 pcs	20 pcs	\$5.76/pcs	\$115.20
Line Item Note: RUSH!!!!										
2	169475	647.7811	Bracket B Issue P/O to ATG : <i>See attached</i> Hard Black Anodize and Prime as per Dwg 647.7800 Rev. A	Firmed	1/31/18	10 pcs	0 pcs	10 pcs	\$15.63/pcs	\$156.30
Line Item Note: RUSH!!!!										
3	170172	647.7812	Center Plate, Upper Issue P/O to ATG : <i>See attached</i> Hard Black Anodize and Prime Dwg 647.7800 Rev. A	Firmed	1/31/18	6 pcs	0 pcs	6 pcs	\$9.88/pcs	\$59.28
Line Item Note: RUSH!!!!										
4	168218	646.3011	RH Half Issue P/O to ATG : Hard Black Anodize, Color Black and Prime as Per Dwg 646.3000	Firmed	1/31/18	10 pcs	0 pcs	10 pcs	\$11.38/pcs	\$113.80
Line Item Note: RUSH!!!!										
5	168219	646.3012	Lower Guide Issue P/O to ATG : Hard Anodize, Color Black and Prime as per Dwg 646.3000	Firmed	1/31/18	10 pcs	0 pcs	10 pcs	\$21.03/pcs	\$210.30
Line Item Note: RUSH!!!!										
6	168217	646.3010		Firmed	1/31/18	6 pcs	0 pcs	6 pcs	\$11.38/pcs	\$68.28



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1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
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PURCHASE ORDER PO038802

Items										
Line Item	Job	Part	Description	Status	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
7	168018	646.3011	LH Half Issue P/O to ATG : Hard Black Anodize and Prime as per Dwg 646.3000 RH Half Issue P/O to ATG : Hard Black Anodize, Color Black and Prime as Per Dwg 646.3000	Firmed	1/31/18	4 pcs	0 pcs ✓ 4x	4 pcs	\$11.38/pcs AT (8/22/07)	\$45.52
8	168241	646.3711	Clip Issue P/O to ATG : Hard Black Anodize and Prime as per Dwg 646.3700 Rev. A	Firmed	1/31/18	12 pcs	0 pcs ✓ 12x	12 pcs	\$7.23/pcs AT (8/22/07)	\$86.76
9	168242	646.3712	Clip Issue P/O to ATG : Hard Anodize, Color Black and Prime as Per Dwg 646.3712 Rev. A	Firmed	1/31/18	12 pcs	0 pcs ✓ 12x	12 pcs	\$7.23/pcs AT (8/22/07)	\$86.76
10	168243	646.3713	Gusset Issue P/O to ATG : Hard Anodize, Color Black and Prime as per Dwg 646.3700	Firmed	1/31/18	10 pcs	0 pcs ✓ 10x	10 pcs	\$16.88/pcs AT (8/22/07)	\$168.80
11	168244	646.3714	Gusset Issue P/O to ATG : Hard Anodize, Color Black and Prime as per Dwg 646.3700 Rev. A	Firmed	1/31/18	12 pcs	0 pcs ✓ 12x	12 pcs	\$16.88/pcs AT (8/22/07)	\$202.56
12	169366	646.9810	Deflector Issue P/O to ATG : Hard Black Anodize and Prime as per Dwg 646.9800 Rev. A	Firmed	1/31/18	10 pcs	0 pcs	10 pcs	\$48.38/pcs	\$483.80
13	168275	647.0113	Strut Doubler Issue P/O to ATG : Hard anodize, Color Black and Prime as Per Dwg 647.0100 Rev. A	Firmed	1/31/18	15 pcs	0 pcs ✓ 15x	15 pcs	\$12.88/pcs AT (8/22/07)	\$193.20
14	168285	647.1510	Upper Deflector Issue P/O to ATG : Hard Black Anodize and Prime as per Dwg 647.1500 Rev. D	Firmed	1/31/18	4 pcs	0 pcs ✓ 4x	4 pcs	\$21.78/pcs AT (8/22/07)	\$87.12
15	168293	647.1713	Spacer Issue P/O to ATG :	Firmed	1/31/18	20 pcs	0 pcs ✓ 20x	20 pcs	\$5.38/pcs AT (8/22/07)	\$107.60



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER PO038802

Items										
Line Item	Job	Part	Description	Status	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
16	169481	647.1714	Hard Black Anodize and Prime as per Dwg. 647.1700 Rev. E Plate Issue P/O to ATG :	Firmed	1/31/18	10 pcs	0 pcs	10 pcs	\$31.38/pcs	\$313.80
17	169482	647.1715	Hard Anodize and Prime as Per Dwg 647.1700 Rev. E Plate Issue P/O to ATG :	Firmed	1/31/18	10 pcs	0 pcs	10 pcs	\$31.38/pcs	\$313.80
18	169479	647.7816	Hard Black Anodize and Prime as per Dwg 647.1700 Rev. E Aft Bracket Issue P/O to ATG :	Firmed	1/31/18	10 pcs	0 pcs	10 pcs	\$7.98/pcs	\$79.80
19	169480	647.7817	Hard Black Anodize and Prime as per Dwg 647.7800 Rev. A Aft Bracket Issue P/O to ATG :	Firmed	1/31/18	6 pcs	0 pcs	6 pcs	\$7.98/pcs	\$47.88
20	169484	647.7611	Hard Black Anodize and Prime as per Dwg 647.7800 Rev. A Lower Deflector Issue P/O to ATG :	Firmed	1/31/18	6 pcs	0 pcs	6 pcs	\$13.18/pcs	\$79.08
21	169474	647.7810	Hard Black Anodize and Prime as per Dwg 647.7600 Bracket A Issue P/O to ATG :	Firmed	1/31/18	4 pcs	0 pcs	4 pcs	\$12.03/pcs	\$48.12
22	169476	647.7813	Hard Black Anodize and Prime as per Dwg 647.7800 Rev. A Center Plate, Lower Issue P/O to ATG :	Firmed	1/31/18	6 pcs	0 pcs	6 pcs	\$9.88/pcs	\$59.28
23	169477	647.7814	Hard Black Anodize and Prime as per Dwg. 647.7800 Rev. A Fwd Bracket Issue P/O to ATG :	Firmed	1/31/18	6 pcs	0 pcs	6 pcs	\$7.98/pcs	\$47.88
24	169478	647.7815	Hard Black Anodize and Prime as per Dwg. 647.7800 Rev. A	Firmed	1/31/18	6 pcs	0 pcs	6 pcs	\$7.98/pcs	\$47.88



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Hawkesbury, ON
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PURCHASE ORDER PO038802

Items										
Line Item	Job	Part	Description	Status	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
25	168297	647.1817	Fwd Bracket Issue P/O to ATG : Support RH ISSUE P/O : Hard Anodize, Color Black As Per Dwg. 647.1800 Rev. A	Firmed	1/31/18	4 pcs	0 pcs	4 pcs	\$12.63/pcs	\$50.52
						✓ 4x		AT	18/02/07	
26	169392	647.7910	Angle Bracket ISSUE P/O : Hard Anodize, Color Black and Prime as per Dwg. 647.7900 Rev.	Firmed	1/31/18	22 pcs	0 pcs	22 pcs	\$9.13/pcs	\$200.86
						✓ 22x		AT	18/02/07	
27	169393	647.7912	Clip ISSUE P/O : Hard Anodize, Color Black and Prime As Per Dwg. 647.7900	Firmed	1/31/18	8 pcs	0 pcs	8 pcs	\$10.73/pcs	\$85.84
						✓ 8x		AT	18/02/07	
28	169397	647.7916	Bracket ISSUE P/O : Hard Anodize, Color Black and Prime as per Dwg 647.7900	Firmed	1/31/18	10 pcs	0 pcs	10 pcs	\$10.48/pcs	\$104.80
						✓ 10x		AT	18/02/07	
29	169914	SWA6A-800A	Connector Bushing -Issue P/O to ATG: -ANODIZE COLOR CLEAR, PER IAW MIL- A-8625F TYPE 2 CLASS 1 WATER SEAL - Certificate of Conformity is required	Firmed	1/31/18	10 pcs	0 pcs	10 pcs	\$5.88/pcs	\$58.80
						10x			18/02/02	ms
30	169929	RBW6405G02131-3G-3	Bell -Issue P/O to ATG: ANODIZE COLOR CLEAR, PER IAW MIL- A-8625F TYPE 2 CLASS 1 Water seal - Certificate of Conformity is required	Firmed	1/31/18	3 pcs	0 pcs	3 pcs	\$5.76/pcs	\$17.28
									Rec'd Jan 26	
31	170021	RB877528-4-21	Cap -Issue P/O to ATG: ANODIZE COLOR BLACK, PER IAW MIL- A-8625F TYPE 2 CLASS 2 -Certification of Conformity is required	Firmed	1/31/18	4 pcs	0 pcs	4 pcs	\$5.76/pcs	\$23.04
									Rec'd Jan 26	
32	169858	RBD29905-5	Hook -Issue P/O to ATG : PO	Firmed	1/31/18	4 pcs	0 pcs	4 pcs	\$38.63/pcs	\$154.52
						4x			18/02/02	ms



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER

PO038802

Items

Line Item	Job	Part	Description	Status	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
			-ANODIZE COLOR RED, PER IAW MIL-A- 8625 TYPE-2 CLASS-2. Water sealant -Certificate of Conformity is required							
Grand Total:										\$3,918.46

Order Notes

Procurement Quality Clauses

A005 right of entry
A012 chemical and physical test report
A016 personnel qualification
A017 raw material identification (as applicable)

A022 Apical Processing
A024 process certifications
A026 certification of material conformance

A041 quality management system
A042 dart notification by supplier
A043 retention of quality documents

A048 counterfeit parts avoidance, detection, mitigation and disposition program

A049 supplier awareness

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Plex 1/30/18 8:45 AM dart.baker.diane



A.T.G. Industries Inc.
731 Industrielle Street
Rockland, ON K4K 1T2
Canada

Ph: (613) 446-4544

Fax: (613) 446-4556

Pack List

Number: 914572

Date: 05-Feb-18

To

Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ship To

Diane Baker
Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ph: 613 632-9577

Fax: 613 632-1053

Ph: 613 632-9577

Fax: 613 632-1053

Terms		Ship Via	
		OUR TRUCK	
Quantity	Description		
	Please reference this document's Pack List number on all correspondences regarding this shipment. If you have any questions, please contact us.		
10 ea	Part: 646.3713 Gusset Hard Black Anodize per MIL-A-8625F, Type III, Class 2, .0005-.0045" (.5 - 4.5mils) Prime per MIL-PRF-23377, Type I, Class N (Customer Supplied), .0006-.0009" (.6 - .9 mils) per drawing. Job: 22379		Rev: A PO: PO038802 Line: 10
12 ea	Part: 646.3714 Gusset Hard Black Anodize per MIL-A-8625F, Type III, Class 2, .0005-.0045" (.5 - 4.5mils) Prime per MIL-PRF-23377, Type I, Class N (Customer Supplied), .0006-.0009" (.6 - .9 mils) per drawing. Job: 22380		Rev: A PO: PO038802 Line: 11
15 ea	Part: 647.0113 Strut Doubler Hard Black Anodize per MIL-A-8625F, Type III, Class 2, .0005-.0045" (.5 - 4.5mils) Prime per MIL-PRF-23377, Type I, Class N (Customer Supplied), .0006-.0009" (.6 - .9 mils) per drawing. Job: 22382		Rev: A PO: PO038802 Line: 13
4 ea	Part: 647.1817 Support RH Hard Black Anodize per MIL-A-8625F, Type III, Class 2, .0005-.0045" (.5 - 4.5mils) Prime per MIL-PRF-23377, Type I, Class N (Customer Supplied), .0006-.0009" (.6 - .9 mils) per drawing. Job: 22394		Rev: A PO: PO038802 Line: 25
8 ea	Part: 647.7912 Clip Hard Black Anodize per MIL-A-8625F, Type III, Class 2, .0005-.0045" (.5 - 4.5mils) Prime per MIL-PRF-23377, Type I, Class N (Customer Supplied), .0006-.0009" (.6 - .9 mils) per drawing.		Rev: NC Made in Canada

Made in Canada.



A.T.G. Industries Inc.
731 Industrielle Street
Rockland, ON K4K 1T2
Canada

Ph: (613) 446-4544

Fax: (613) 446-4556

Pack List

Number: 914572

Date: 05-Feb-18

To

Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ship To

Diane Baker
Dart Aerospace Ltd
1270 Aberdeen St
Hawkesbury, ON K6A 1K7

Ph: 613 632-9577

Fax: 613 632-1053

Ph: 613 632-9577

Fax: 613 632-1053

Terms		Ship Via	
		OUR TRUCK	
Quantity	Description		
	- .9 mils) per drawing Job: 22396 PO: PO038802 Line: 27		
CERTIFICATE OF CONFORMANCE A.T.G Industries Inc. certifies that all items in this shipment conform to the requirements. Date: <u>5/2/18</u> Certified Signature: <u>[Signature]</u> Receiver Signature: _____ A.T.G Industries Inc. is AS9100 Registered and Nadcap Chemical Processing Accredited. Note: This Packing Slip may contain parts that have been PLATED. Items that are plated may be subject to natural tarnishing and it is suggested that they be inspected within 24 hours of receipt.			
Made in Canada.			